Grade G PROMPT sheet

G/1 Place value

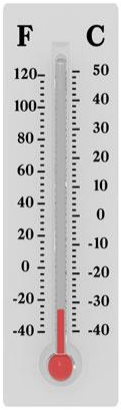
The position of the digit gives its size

thousands	hundreds	tens	units	•	tenths	hundredths
4	3	5	2	•	6	1

Example
The value of the digit '4' is 4000
The value of the digit '3' is 300

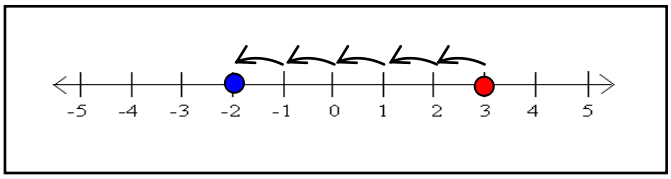
G/2 Recognise negative numbers

- These can be seen on a thermometer



The numbers below freezing (0^0) are negative

- Number line to work out sums



3 – 5 = -2

G/3 Multiples

- Multiples are the number sequences that make up the tables

Example
The multiples of 2 are:
2 4 6 8 10 ...

The multiples of 5 are:
5 10 15 20 25 ...

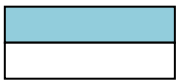
The multiples of 10 are:
10 20 30 40 50 ...

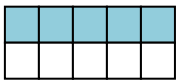
G/4 Fractions

$\frac{1}{2}$ ← numerator
← denominator

- This means 1 part out of every 2

Example 1





$\frac{1}{2}$ = $\frac{5}{10}$

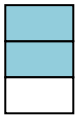
These fractions are all $\frac{1}{2}$

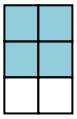
$\frac{1}{2}$ $\frac{2}{4}$ $\frac{3}{6}$ $\frac{4}{8}$ $\frac{5}{10}$

Example 2

$\frac{2}{3}$

- This means 2 part out of every 3





$\frac{2}{3}$ = $\frac{4}{6}$

G/5 Decimals

- **Decimals and money**

£3.00 means 300p
£3.50 means 350p
£3.05 means 305p

Remember
A calculator does not know if the numbers you put in are money so £3.50 will look like 3.5

- **Ordering Decimals**

1.23 m → 1.23 m
1.6 m → 1.60 m
1.65 m → 1.65 m
1.3 m → 1.30 m

Make the number of digits the same, it is easier to order them

Smallest → Largest
1.23 m 1.30 m 1.60 m 1.65 m

G/6 Know the 3, 4 and 6 times tables

1	x	3	=	3
2	x	3	=	6
3	x	3	=	9
4	x	3	=	12
5	x	3	=	15
6	x	3	=	18
7	x	3	=	21
8	x	3	=	24
9	x	3	=	27
10	x	3	=	30

1	x	4	=	4
2	x	4	=	8
3	x	4	=	12
4	x	4	=	16
5	x	4	=	20
6	x	4	=	24
7	x	4	=	28
8	x	4	=	32
9	x	4	=	36
10	x	4	=	40

1	x	6	=	6
2	x	6	=	12
3	x	6	=	18
4	x	6	=	24
5	x	6	=	30
6	x	6	=	36
7	x	6	=	42
8	x	6	=	48
9	x	6	=	54
10	x	6	=	60

G/7 Division facts from a multiplication

Any multiplication sum can be written as 2 division sums

14 x 5 = 70

70 ÷ 14 = 5

70 ÷ 5 = 14

G/8 Balancing a sum

left hand side is equal to right hand side

3 x 4 = 12

This can be used to find missing numbers

3 x 4 = 3 + □
12 = 3 + 9
So □ = 9

G/9 Add 2 digit numbers mentally

Partitioning

36 + 19

30 + 6 + 10 + 9
= 40 + 15
= 55

36 + 10 + 9
= 46 + 9
= 55

G/9 Subtract 2 digit numbers mentally

63 - 26

Partitioning

63 - 20 - 6
= 43 - 6
= 37

Counting on from 26

(26) + 4 + 33
= 37

G/11 Solve problems

- **When to multiply and when to divide**
- **When to round up and when to round down**

Here is an example

There are 17 children in the playground.
Each bench in the yard can seat 3 children.
How many benches will be needed?

17 ÷ 3 = 5 r 2

- We need <u>to divide</u> to share the children around the benches
- We need <u>to round up</u> to 6 benches for the remaining 2

Here is another example

Dan made 47 cakes.
He sells them in boxes of 6.
How many full boxes will we have?

46 ÷ 6 = 7 r 4

- He needs <u>to divide</u> to share the cakes into boxes
- He needs <u>to round down</u> to 7 boxes because he needs to have 6 cakes in each box

G/12 <u>Written method for addition</u>

- **Line up the digits in the correct columns**

e.g. 132 + 239

H	T	U	
1	3	2	
2	3_1	9	+
3	7	1	

G/12 <u>Written method for subtraction</u>

- **Line up the digits in the correct columns**

e.g. 327 - 119

H	T	U	
3	$^1\not{2}$	^{1}7	
1	1	9	-
2	0	8	

G/13 <u>Methods for multiplying</u>

38 x 3

<u>Column method</u>

$$\begin{array}{r} 38 \\ \times\ 3 \\ \hline 114 \\ {\scriptstyle 2} \end{array}$$

<u>Grid method</u>

	30	8
3	90	24

90 + 24 = **<u>114</u>**

<u>Partitioning method</u>

38 x 3
= 30 x3 + 8 x 3
= 90 + 24
= 114

<u>To multiply by 10</u>
Move all the digits along one place to the left.
Remember to put a zero in the units.

H	T	U
	3	0
3	0	0

30 x 10 = 300

G/13 <u>Methods for dividing</u>

25 ÷ 3

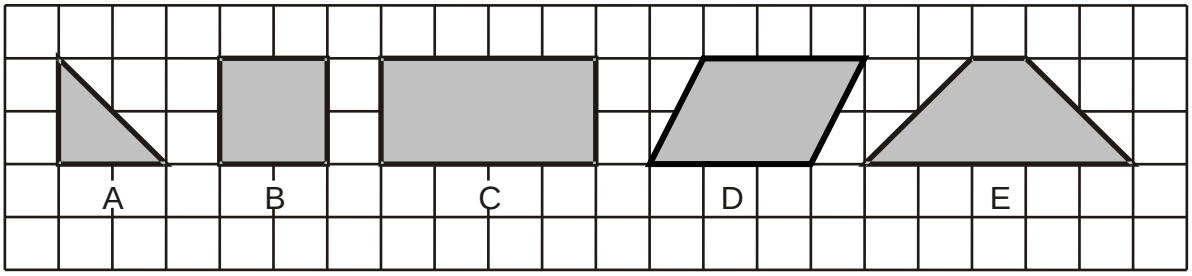
8 x 3 = 24 So 25 ÷ 3 = 8 r 1

<u>To divide by 10</u>
Move all the digits along one place to the right.

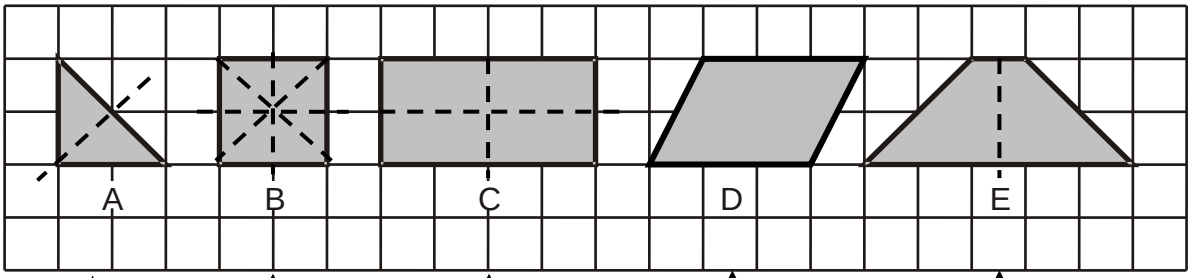
H	T	U
	3	0
		3

30 ÷ 10 = 3

G/14 Classify 2D shapes

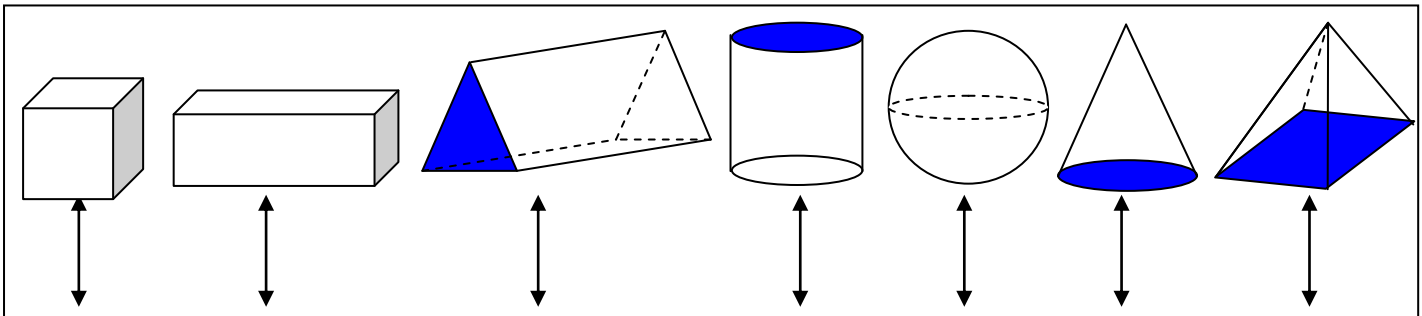


Triangle | Square | Rectangle | Parallelogram | Trapezium

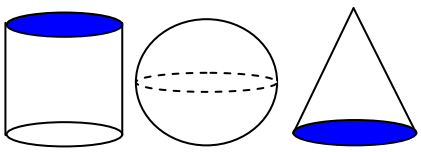


Reflective symmetry | Reflective symmetry | Reflective symmetry | **NO** reflective symmetry | Reflective symmetry

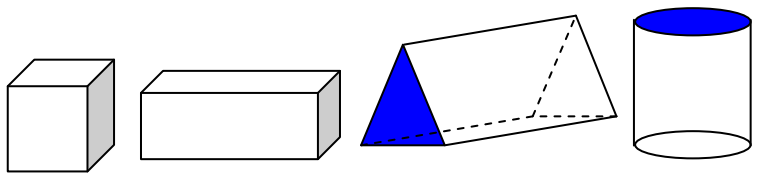
G/14 Classify 3D shapes



Cube | cuboid | triangular prism | cylinder | sphere | cone | square-based pyramid

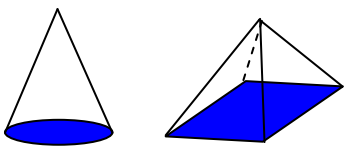


All have a curved surface

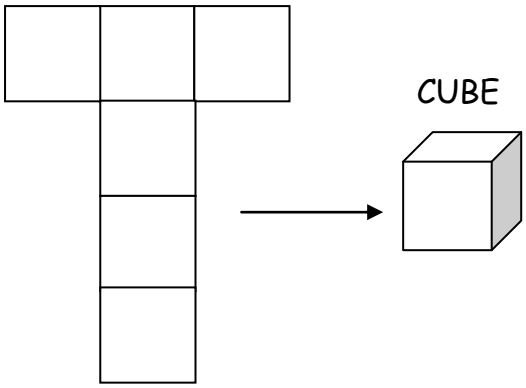


All are prisms – same shape through the length

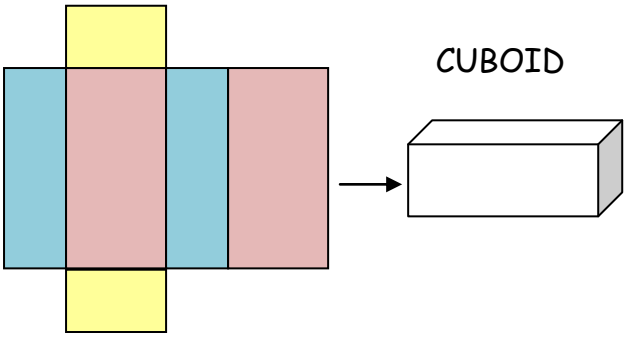
Pyramids go to a point



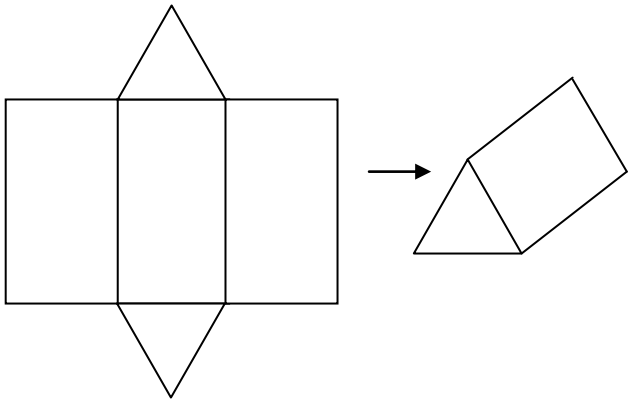
G/15 Nets of 3D shapes



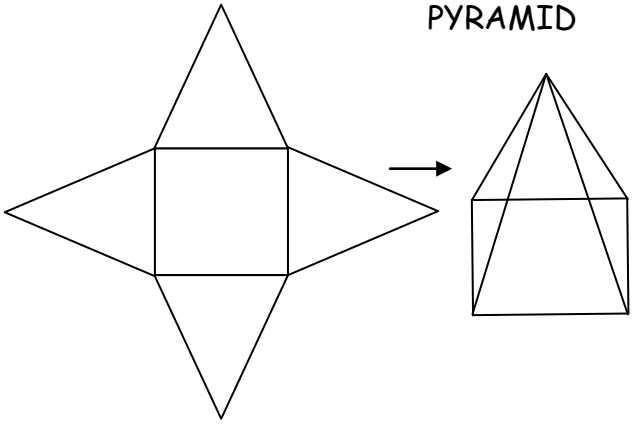
CUBE



CUBOID

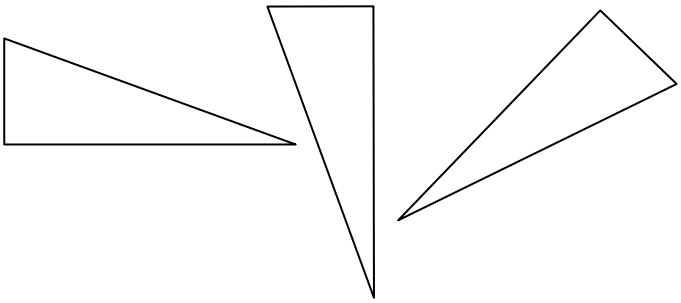


SQUARE-BASED PYRAMID



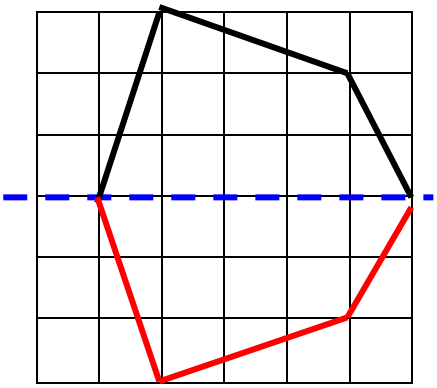
G/16 Shapes in different orientations

These are the same shapes – just moved round

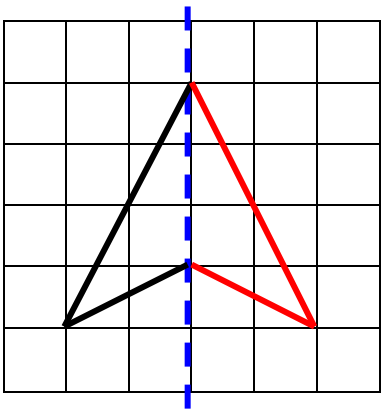


These shapes have been reflected – flipped over

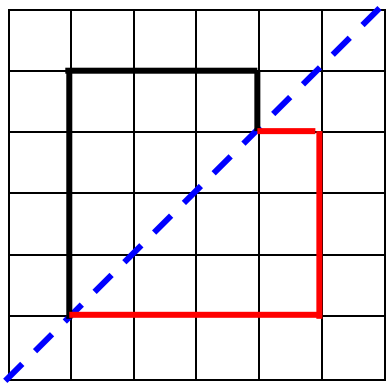
In a HORIZONTAL mirror line



In a VERTICAL mirror line



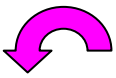
In a 45^0 mirror line



G/17 Describe position and movement

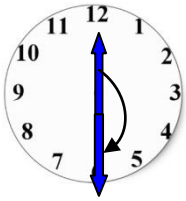
LEFT RIGHT

ANTICLOCKWISE CLOCKWISE



Clockwise 90^0 or $\frac{1}{4}$ turn

Anticlockwise 90^0 or $\frac{1}{4}$ turn

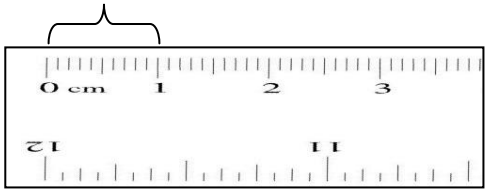


Half turn

G/18 Use standard units

MEASURES OF LENGTH

1cm = 10mm



1 metre = 100cm

1 kilometre = 1000m

MEASURES OF WEIGHT

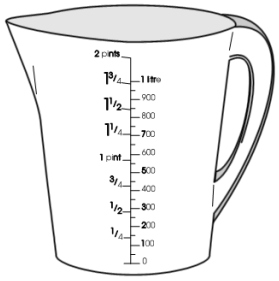
1 gram

1kilogram = 1000g

MEASURES OF LIQUID(Capacity)

5 millilitre spoon

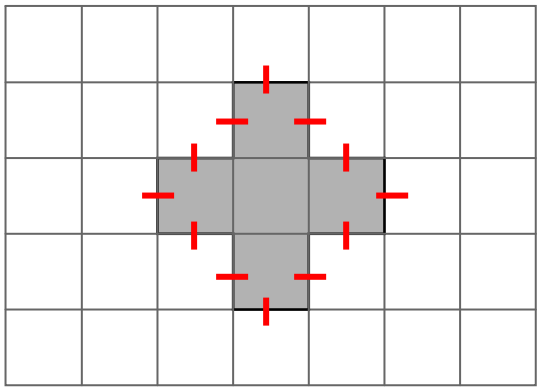
1 litre = 1000ml



G/19 Other units of measure

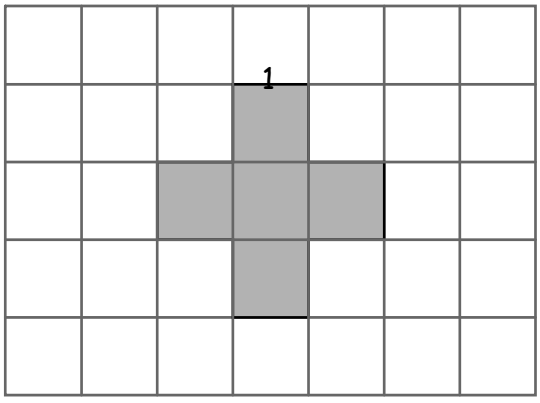
PERIMETER is the distance round the outside of a shape

Perimeter of this shape = 12cm

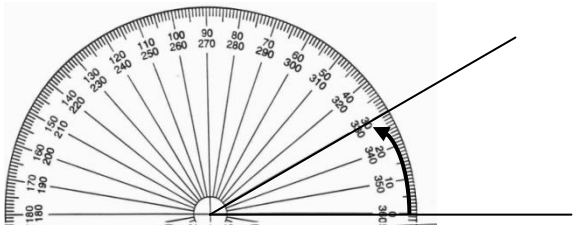


AREA is the number of squares **INSIDE**

Area of this shape = $5cm^2$



ANGLE is the amount of turn
This angle is 30^0



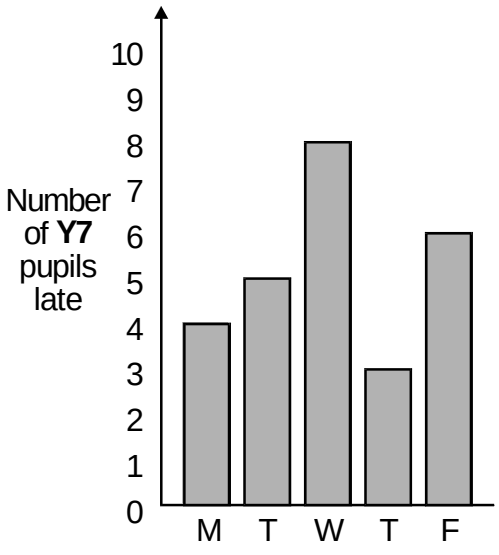
G/20 Gather information

To record the number of birds in the garden

Type of bird	Tally	Number of birds
Blackbird	𝍸	10
Blue-tit	𝍸	4
Starling	𝍸	2
Sparrow	𝍸	3
Other	𝍸	1

G/21 Construct bar chart

Leave gaps between the bars



G/21 Construct pictogram

This question is about the number of bags of sugar you could buy with £10

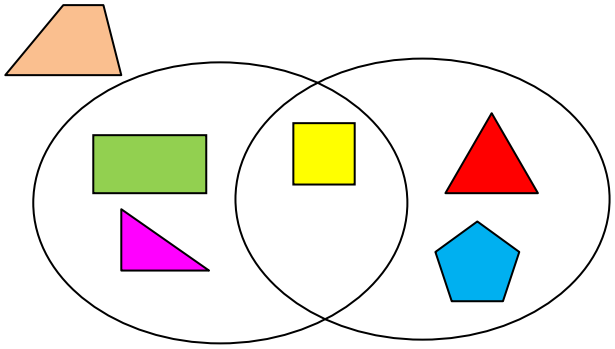
Key: Sugar = 4 bags

Year	Number of bags
1995	Sugar Sugar Sugar Sugar
1999	Sugar Sugar Sugar Sugar Sugar

Do not forget the KEY

G/22 Venn Diagram

These are used to record and sort information



Shapes with right angles

Shapes with equal sides

G/22 Carroll Diagram

	Number of Boys	Number of Girls
Brown eyes	11	12
Blue eyes	4	3

3/23 Extract information from bar charts, pictograms and tables